



Device Material Content

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Assembly: ASEM
Size (mm): 23 x 23

Package Code:

BG554

Lead pitch (mm): 0.8

MSL: 3

Reflow max (°C): 260

Package: 554 caBGA

Total Device Weight 1.79 Grams

Products:

FE5

July, 2019

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.49%	0.0267	1.49%	0.0267	Silicon chip	7440-21-3	100.00%	Die size: 6.55 x 7.04mm
Mold Compound	44.60%	0.7979	3.12%	0.0559	Epoxy Resin	-	7.00%	Mold Compound: Sumitomo G750SE (ULA)
			2.23%	0.0399	Phenol Novolac	9003-35-4	5.00%	
			2.23%	0.0399	Metal Hydroxide	-	5.00%	
			0.22%	0.0040	Carbon Black	1333-86-4	0.50%	
			36.80%	0.6583	Silica Fused	60676-86-0	82.50%	
D/A Epoxy	0.22%	0.0039	0.18%	0.00315	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.04%	0.00079	Esters & resins	-	20.00%	
Wire	0.18%	0.0032	0.18%	0.0032	Copper	7440-50-8	98.50%	0.8 mil diameter; 1 wire per solder ball
			0.00%	0.0000	Palladium	7440-05-3	1.50%	
Solder Balls	7.72%	0.1381	7.45%	0.1333	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.23%	0.0041	Silver (Ag)	7440-22-4	3.00%	
			0.04%	0.0007	Copper (Cu)	7440-50-8	0.50%	
Substrate	29.76%	0.5325	0.00%	0.0000	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A*
			0.00%	0.0000	Glass fiber	65997-17-3	68.00%	
Foil	11.12%	0.1990	0.00%	0.0000	Copper	7440-50-8	82.00%	
			0.00%	0.0000	Nickel plating	7440-02-0	15.10%	
			0.00%	0.0000	Gold plating	7440-57-5	2.91%	
Solder Mask	4.90%	0.0877	0.00%	0.0000	Quartz	14808-60-7	54.37%	Solder mask PSR4000 AUS 308
			0.00%	0.0000	Dipropylene glycol monomethyl ether	34590-94-8	7.33%	
			0.00%	0.0000	Morpholine derivative	71868-10-5	3.32%	
			0.00%	0.0000	Silicon dioxide	7631-86-9	3.00%	
			0.00%	0.0000	Silica, amorphous	112945-52-5	3.00%	
			0.00%	0.0000	Carbon black	1333-86-4	0.24%	
			0.00%	0.0000	Trade secret ingredients	-	28.74%	

Notes: * 0.30% max. concentration (of total pkg wt.) of Bisphenol A (CAS# 80-05-7), contained in substrate laminate material as impurity - not intentionally added.

The values listed above are nominal values based on studies of representatives of this particular package type, and are believed to be as accurate as possible.

Constituent substances and proportions in epoxy materials are before curing.

The information provided above is representative of the package as of the date listed, and is subject to change at any time.

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Rev. C